

CLAIMS

I CLAIM:

1. A method of locking two mated connectors together, the method comprising the steps of:
 - 2 mating the two connectors by engaging a latch mechanism on one connector with a corresponding latch mechanism on the other;
 - 4 rotating a threaded member that has left-hand and right-hand threaded portions, one of which portions is threadably coupled to a stationary end of one of the connectors, and the other of which portions is threadably coupled to the latch mechanism of that one of the connectors; and
 - 6 drawing the two mated connectors together with tension when the threaded member is rotated in a first direction and relaxing the tension when the threaded member is rotated in a direction opposite the first direction.
2. A positive locking male BNC connector comprising:
 - 2 a housing;
 - 4 a male shell, carried by the housing, having inner male sleeve and also having a first region of external threads of a first handedness;
 - 6 a male center pin assembly disposed within the inner male sleeve;
 - 8 a BNC latch having a bore therethrough for sliding onto and rotating about the male shell, and having a second region of external threads of a second handedness opposite the first handedness, and also having slots and detents on the interior of the bore for engaging the bayonet pins of a female BNC connector with which the positive locking male BNC connector is to be mated;
 - 10 a barrel having a bore therethrough within which is a third region of internal threads that engage the first region of external threads and also a fourth region of internal threads that engage the second region of external threads; and

14 wherein rotation of the barrel in one direction draws a mated female BNC connector
16 whose bayonet pins are engaged in the detents of the BNC latch toward the male shell until the
inner male sleeve bottoms out inside the female BNC connector.

3. A self-latching and positive locking male BNC connector comprising:

2 a housing;
4 a male double shell, carried by the housing, having inner and outer male sleeves on a
common axis and separated by an annular space and also having a first region of external
threads of a first handedness;

6 a male center pin assembly disposed within the inner male sleeve;
8 a BNC latch having a bore therethrough for sliding onto and rotating about the outer
male sleeve, and having a second region of external threads of a second handedness opposite
the first handedness, and also having ramps, slots and detents on the interior of the bore for
10 engaging the bayonet pins of a female BNC connector with which the positive locking male
BNC connector is to be mated;

12 a barrel having a bore therethrough within which is a third region of internal threads
that engage the first region of external threads and also a fourth region of internal threads that
14 engage the second region of external threads; and

16 wherein rotation of the barrel in a first direction draws a mated female BNC connector
whose bayonet pins are engaged in the detents of the BNC latch toward the male double shell
until the inner male sleeve bottoms out inside the female BNC connector.

4. A self-latching and positive locking male BNC connector as in claim 3 further comprising a
2 resilient bias mechanism coupled between the BNC latch and the housing and that urges an idle BNC
latch against a stop and into a selected rotational position relative to the bayonet pins of the female
4 BNC connector that is to be mated to.

5. A self-latching and positive locking male BNC connector as in claim 3 further comprising a
2 resilient bias mechanism coupled between the barrel and the housing and that urges the barrel to rotate
in a direction opposite the first direction.

6. A self-latching and positive locking male BNC connector as in claim 3 wherein the male
2 center pin assembly further comprises a male BNC end and a second end that is the center pin of
another RF connector disposed on a non-BNC end of the self-latching and positive locking male BNC
4 connector.

7. A self-latching and positive locking male BNC connector as in claim 3 wherein the female
2 BNC connector is disposed upon an oscilloscope.